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THE TEAM WORKS OF STUDENT GROUPS DURING COLLECTIVE INFORMATION SEEKING IN RURAL VOCATIONAL TRAINING INSTITUTIONS (VTI)

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Abstract:
The study sought to investigate the collective information-seeking behavior of student groups in vocational education institutions in Tanzania's rural areas. Specifically, the study seeks to examine types of collective information required to VET student groups in rural-based vocational education training (VET) institutions to accomplish collective assignments, assess importance of collective information requirements during collective information seeking (CIS) to accomplish collective assignments, to investigate the barriers to VET student groups encounter during CIS process to VET in rural library settings in Tanzania when accomplishing collective assignments and recommend model of VET student groups during CIS process when accomplishing collective assignments. Karunakaran, Spence, and Reddy's (2013) model anchored to conduct this study. Collective information seeking (CIS) of vocational education training (VET) student groups depends on the availability of CIS policy. CIS policy ensures VET student groups get required IL skills and access to ICT equipment during the CIS process. IL skills and access to information communication technology (ICT) equipment are vital for vocational education training (VET) students to get their collective information requirements to accomplish the groups' assignments given. However, underdeveloped countries and

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middle-income countries require reliable CIS policy that directs VET student groups during the CIS process. The availability of CIS policy guarantees VET students to innovate new products through the exchange of ideas (information) and knowledge during CIS as their collective assignments are practical oriented. VET students in Tanzania's rural areas lack a CIS policy that directs VET students during the CIS process. This study examined CIS of VET student groups of Tanzania rural areas, aiming to improve CIS through overcoming challenges encountered by VET student groups by suggesting a hypothesized model during the CIS process. This study employed descriptive approaches. Qualitative research serves to develop a rich and detailed understanding of certain theories, concepts, and constructs. This method also provided all-inclusive and complete views of group behavior during the CIS process and increased the validity of the research results using descriptive data and methodological triangulation. The study recruited 72 participants from the second year in VET institutions in Tanzania's rural areas: 18 VET students for interview, 18 VET students for observation and 36 VET students for focus group discussion (FGD). The participants were between 21 and 30 years old. Ten (10) VET students (56%) were male, and eight (8) VET students (44%) were female during the interview and focus group discussion. The participants were randomly chosen from those who expressed their interest to reach 72 participants. Qualitative data was analysed through thematic analysis. Thematic analysis helped to develop different themes relating to the specific objectives of this study. IL skills required to VET student groups were found to be the cross-cutting process among all VET respondents during collective information seeking (CIS). VET students could not get the collective information requirements in the absence of information-seeking skills, as it was mentioned by 17 respondents (90%). The major challenges identified were: the absence of subjects' librarians to assist VET students during CIS and VET students' failure to evaluate massive amounts of retrieved practical and theoretical information due to a lack of required IL skills during CIS process. Other challenges were a lack of required information-seeking skills among VET students and a lack of practical information during CIS. This study concluded that, practical information is required to VET students to accomplish collective assignments given during collective information seeking. Furthermore, the results from this study presented that policy on CIS, information seeking skills and access to ICTs equipment are vital for accomplishing group assignments. The improvement of CIS to VET student groups is achieved in the presence of CIS policy. The findings of this study and hypothesised model during CIS to VET student groups help for improving information services delivering to VET rural library settings.

Keywords: collective information seeking, practical and theory information, collective information literacy, student groups' assignments, VET rural library settings, Tanzania

1. Introduction

Collective student group information seeking at vocational education institutions (VEI) in Tanzania's rural library settings has emerged to be an important, new area of study, and naturally generated keen interest in the academic world to share new information and knowledge. However, with the increasing emphasis on collective works in universities, collective information seeking (CIS) among university students has emerged as an important and interesting area of study in the academic world (Wei *et al.*, 2012).

CIS constitutes a process of seeking and sharing information in a group that wishes to achieve a specific target or targets. CIS also refers to the process of more than one person seeking and sharing information alongside others to achieve a shared goal for an assigned task (Shah, Capra, and Hansen, 2016). Thus, collective information seeking behavior (CISB) has to do with the process that allows groups to search for and share information by identifying collective information requirements, retrieving such information, evaluating it, sharing information, and finally using that searched for and retrieved information to meet group information requirements to accomplish groups' tasks. Similarly, Boruah and Chutia (2020) contend that, information seeking behavior refers to the path individuals take to satisfy their information requirements, including evaluating, sharing and use information. CISB can also constitute an individual's way of seeking and collecting information for group usage, updating and developing knowledge. Globally, the library happens to be the most widely utilised source of information in literate societies (Ilhaq and Tousif, 2021). The assumption is that CIS in VEI is achievable in rural library settings. In this regard, Ilhaq and Tousif (2021) proffer that a library setting is a central point where students converge to acquire information and knowledge, share ideas and work collectively to bring about innovations. Students grasp that libraries facilitate information-seeking because of their information collection, services and programs as they skilled and experienced staff to help information-users (Ilhaq and Tousif, 2021). Working together in groups is one of the vital components that aid groups to solve group problems they get as VET students practice CIS in rural library settings in Tanzania.

This study is designed to fill that gap by looking at another dimension of the importance of the CIS process of vocational student groups. Moreover, this study highlights the importance of navigating collective information during CIS to the assigned student group tasks. This study becomes the benchmark for stimulating further research of other special groups in the learning environments.

1.1 Problem Statement

Students of higher learning, in the context of Tanzania, were unable to seek, retrieve and share information during CIS due to the challenge of lack of information literacy (IL) skills to meet their information requirements. As such, Ndenje-Sichalwe and Elia (2020) call for training on information searching, knowledge mapping and problem-based learning targeting postgraduate information studies students in Tanzania to empower

them to seek, retrieve and share information for accomplishing assignments as required. The trends of information-seeking behaviour research show that the current researchers must study information needs and information literacy dimensions together (Ganaie and Khazer, 2014).

Lwehabura (2018), who assessed literacy skills during information seeking among first-year postgraduate students in Tanzania, found that 15 (10.3%) of the students believed that, searching for information from the online public access catalogue (OPAC) was complicated, and locating and retrieving books from shelves was problematic for nine (6.2%) respondents.

1.2 Aim and Objectives of the Study

This study aims to investigate the collective information seeking (CIS) of student groups in vocational education training (VET) institutions in Tanzania's rural areas. Specifically, the study seeks to:

1) Evaluate the collective information required to student groups during collective information seeking (CIS) in vocational educational training (VET) institutions in rural library settings,
2) Examine the importance of collective information seeking to VET student groups,
3) Assess the challenges faced by VET student groups during the CIS process, and
4) Propose an appropriate model that improves the collective information seeking to VET student groups.

1.3 Research Questions

1) What is the collective information required to student groups during collective information seeking (CIS) in vocational educational training (VET) institutions in rural library settings?
2) What is the importance of collective information seeking to VET student groups?
3) What are the challenges faced by VET student groups during the CIS process?
4) What is an appropriate model that can be recommended to VET student groups during CIS?

2. Literature Review and Theoretical Underpinning

2.1 Information that Groups Apply in Solving Information-Based Access Problems

Students exchange ideas, experiences or skills from one individual to another individual student or group of students (Chen, Tan, and Pi, 2021). Information-seeking requires the student or group of students to interact with each other either face-to-face or through non-physical contact (Chen, Tan, and Pi, 2021). Information seeking entails the communication of information on both tacit and explicit knowledge (Zaqout and Abbas, 2012). In other words, seeking diverse information is the basis of collective knowledge improvement. Grove *et al.* (2017) further confirm that the operational-level information requires systematic application in the framing and reframing of a strategic vision.

Information seeking must also be extracted from the enactment of the vision to inform its replenishment to solve the existing problem (Grove *et al.*, 2017). Normally, the comprehension of how to utilise information to generate new knowledge can be applied in a different context, particularly if the person gets suitable support to re-contextualise shared skills (Huche, 2019).

Another perspective comes from Griesbaum *et al.* (2015), who found that factual information is the dominant content type with the highest knowledge value attached to it since it constitutes the strongest predictor for the generation of new shared information. Furthermore, knowledge generation follows a predominantly socio-cultural paradigm of information exchange. Oyemo and Asiyanbi (2020) found the types of information literacy courses offered to students at the Polytechnic of Ibadan students in Nigeria to include orientation programmes, User education programmes, library tour and sensitisation, teaching on library use, referral services and current awareness drives that helped students in seeking, retrieving and sharing vital information.

2.1 Importance of Sharing Information during Information Seeking

Information sharing is crucial during collective information seeking. This entails recognising when information is needed and shared; it helps information seekers to efficiently locate, accurately evaluate, share, and use information efficiently and effectively in addition to clearly communicating it in various formats (Baidoo, Asare and Anafo, 2021). In fact, information sharing during information seeking serves as the basis for lifelong learning and is essential in all academic levels and all learning environments (Faraji-Khiavi *et al.*, 2021).

Overall, studies conducted in Botswana, the United States, and Taiwan (Chanda, 2012; Pitocco, 2013; Avula, 2020; Cheng and Tsai, 2017) concluded that students did not have requisite information literacy (IL) skills to meet their information requirements during information seeking. This aspect calls for a need to systematically study the IL capacity and aptitude of student groups at vocational training institutions during the information-seeking process at rural VET libraries to investigate how they seek, retrieve, and share information to accomplish the collective assignments.

The central finding in this section of the literature review is that IL skills are centripetal during information seeking, enabling students to seek, locate, retrieve, evaluate, share and utilise information to meet their information requirements.

2.2 Challenges Faced by Students during Information Seeking

Lwehabura (2018), who had assessed literacy skills during information seeking among first-year postgraduate students in Tanzania, found that, 15 (10.3%) of the students believed that, seeking for information from the online public access catalogue (OPAC) was complicated, and locating and retrieving books from shelves was problematic for nine (6.2%) respondents.

However, Klomri and Tedre (2021) found the number of postgraduate students at the University of Dar-es-salaam in Tanzania mentioned PDF documents as trustworthy,

as one student explained: "*First you enter your words and then 'PDF', then you click 'Search', and the information that appears there is trusted."* Moreover, the high number of students who claimed they did not evaluate digital information was astonishing (Klomsri and Tedre, 2021). Similarly, undergraduate distance learning students in Tanzania contended with the problems of lacking awareness of online resources and skills for them to seek information on the web effectively (Luambano, 2016). This revealed that college students in Tanzania face the challenge of lacking appropriate information literacy skills during the information-seeking process.

Also, Mason (2019) found that, first-year college students in California in the United States developed limited topics and, sometimes ended up with too much information that overwhelmed them so much that they were unable to differentiate between major and minor points during information seeking. In a study that was conducted in Taiwan, Cheng and Tsai (2017) found that, the online research behaviours of engineering graduate students had achieved an overall mean score of 53.39, which was below the recommended acceptable score of 60 or 70 advocated in several previous IL studies. Undergraduate and postgraduate students in the United Kingdom also faced difficulty when it came to identifying salient information from task narratives and grasping the use of reference sources; moreover, they even failed to distinguish between a fact and an opinion, as Bickley and Corral (2012) were able to establish.

Malanga and Jorosi (2018), who assessed information-seeking skills among undergraduate students at the University of Livingstonia in Malawi, focusing on second-years, found that they generally lacked skills in information search and web retrieval techniques during information seeking.

Similarly, Avula (2020) found a well-documented problem in information-seeking since the information-users in North Carolina failed to adequately translate their information requirements into an effective search request during the information-seeking process.

Furthermore, Al-Qallaf (2018), who assessed information-seeking skills among master's degree students during information seeking at Kuwait University, found that they were unable to identify key concepts, had weak knowledge of information management systems, and lacked effective search strategies during information seeking. In addition, students lacked an understanding of the scope and purpose of information sources, let alone determining the quality of sources (Al-Qallaf, 2018).

Chanda (2012) observes that, despite the forms of IL being offered, the students in higher learning institutions in Botswana graduate with low IL skills. The students did not grasp the various IL aspects and, as a result, could not apply them in their research (Chanda, 2012). Furthermore, Chanda (2012) reports that some participants lacked computer skills and did not even know what information was available for them to retrieve and utilise during information seeking. Participants also reported that they were unable to access information because of a lack of knowledge on using modern technology (Chanda, 2012).

The literature reviewed on IL finds the following: Firstly, IL had been marginalised during information seeking in many institutions of higher learning (IOHLs). Secondly, IL is being offered in some institutions but without equipping students with requisite IL skills for information seeking. Thirdly, the IL ought to be mandatory in educational institutions of higher learning during information seeking. Fourthly, there is a need to restructure the information requirements of information seekers to reflect the utilisation of information in the real world.

2.3 Theoretical Underpinning

2.3.1 Karunakaran, Spence, and Reddy's (2013) Model

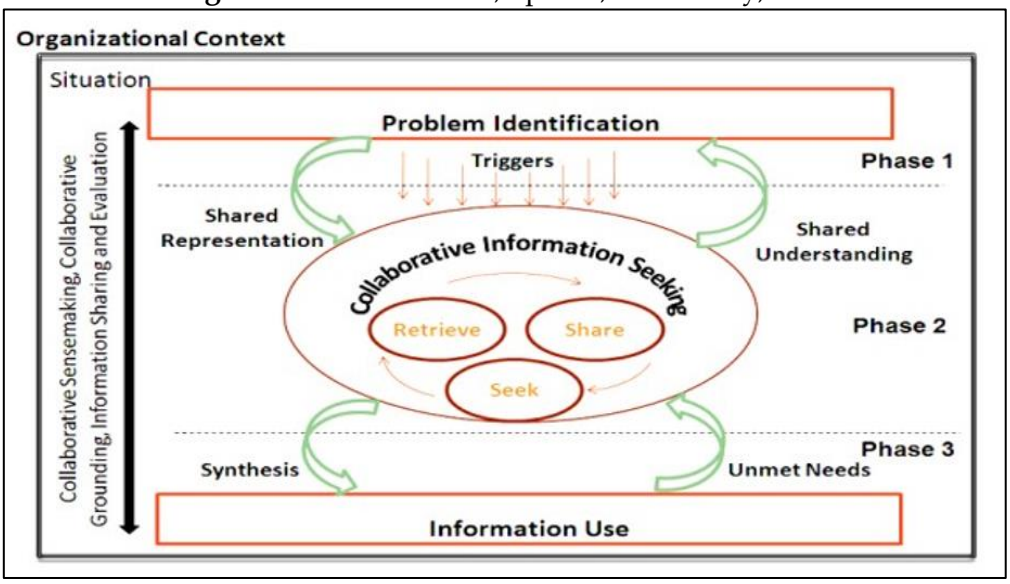
Karunakaran, Spence, and Reddy's (2013) model has three phases of group-based information activities: Problem identification; three micro levels comprising seeking, retrieving and sharing; and information use that allows the information generated in the first two stages that was collectively compared and evaluated for a common understanding and usage to materialise.

The first phase of Collective Information Seeking Behaviour (CISB) entails problem identification, which allows information seekers to identify their collective information requirements based on their common understanding. In an institution, people usually solve problems or meet information requirements and produce a shared representation of the problem to solve them via collective communication. A shift from individualised information-seeking activities to CISB was induced by lack of domain capability, complexity of the information requirements, and fragmented information resources due to a lack of readily accessible information. At the second stage of activity, people's collective information-seeking behaviour helped to solve complex problems and achieve the shared goal. Their model was based on the premise that CIS comprised three micro levels: Seeking, retrieving and sharing information. In the final stage, the information obtained in the first two phases was also collectively compared and evaluated to develop a common understanding and use.

This study applied this model primarily because it delineates the challenges information seekers face during the collective information seeking process (as in stage three, which indicates unmet information requirements of users group during CIS process). This study was guided by Karunakaran, Spence, and Reddy's (2013) model because the model reveals aspects of collective information seeking and challenges faced by information seekers when seeking, retrieving, and sharing information collectively. Despite many models of collective information-seeking behaviour, Karunakaran, Spence, and Reddy's (2013) model emerged as the prime model of choice and has been widely used. Also, the model of Karunakaran, Spence, and Reddy (2013) had been applied since it related to the aims of this study that needed to probe the collective information seeking (CIS) of information seekers and challenges information seekers face during collective information seeking, retrieving, and sharing.

This study was guided by Karunakaran, Spence, and Reddy's (2013) model, as Figure 1.1 below illustrates:

Figure 1.1: Karunakaran, Spence, and Reddy, 2013



Source: Karunakaran, Spence, and Reddy, 2013

3. Research Methodology

3.1 Research Design

This study employed descriptive approaches. Qualitative research serves to develop a rich and detailed understanding of certain theories, concepts, and constructs. This method also provided all-inclusive and complete views of group behaviour of information sharing during collective information seeking process and increases the validity of the research results using descriptive data and methodological triangulation. Moreover, the qualitative method accords the researcher an opportunity to interpret reality as it is observed in its specific context (Thomas, 2021). As the qualitative research permits scholars to obtain a rich and profound comprehension of how a certain theory occurs (or does not occur) in practice, these methods allow complex issues to be evaluated in ways that quantitative methods cannot uncover (Aguinis *et al.*, 2020). More specifically, qualitative methodologies allow researchers to observe explanations for a phenomenon so that they can assign in-depth meanings to their findings that are not possible through the aggregated quantitative results (Kouamé and Langley, 2018).

3.2 Population and Sampling

The population of the study comprised of VTI final-year students in Tanzania's rural districts. Final-year students from three (3) VTI institutions amount to 259. Final-year students were included in this study since they are expected to be more experienced in seeking, retrieving, and sharing information. The study recruited 72 participants from the second year in VET institutions in Tanzania's rural areas: 18 VET students for interview, 18 VET students for observation and 36 VET students for focus group discussion (FGD). From the outset, the respondents were briefed beforehand about the study in line with established research protocols. Thereafter, the participants had to sign

consent forms after briefings for them to provide informed consent. The VET interview participants of three (3) pairs in each VET institution who signed up were given the group's task to accomplish. They are required to be familiar with the use of digital libraries. Ten (10) VET students (56%) were male, and eight (8) VET students (44%) were female during the interview and focus group discussion. The participants were between 21 and 30 years old. The convenience sampling technique was used to select participants. A convenience sample is one that is drawn from a source that is conveniently accessible to the researcher (Andrade, 2021). Convenience sampling is non-probability sampling that is often used for qualitative research (Stratton, 2021). The participants were randomly chosen from those who expressed their interest to reach 72 participants. The participants chose the day and time convenient to them for their sessions to participate during the interviews and focus groups discussions.

3.3 Instrumentation, Data Collection and Analysis

The data for this study was collected through the use of observation, interviews and focus group discussions. An observation checklist, interview guide and focus group discussion guide were used to collect data from VET participants. Face-to-face interviews present an advantage because physical conversational meetings can enhance the possibility of creating a safe and comfortable atmosphere for the interviewees to express their views (Saarijarvi and Bratt, 2021). In this regard, Basil (2019) contend that FGDs are advantageous because they constitute expressive collecting data means that yield a lot of information in a relatively short time; the method is, in fact, a resource-saving data collection approach appropriate for investigating the reality of life and experiences of the respondents (Seven *et al.*, 2021). FGD assists the researcher in witnessing interactions of the study participants as they perform tasks (Marwa, 2017) of interest to the study in accordance with the research objective and research problem.

The qualitative data obtained during the focus group discussion, interview and observation were analyzed using the thematic analysis technique using the NVivo software. However, thematic analysis helped to develop different themes relating to the specific objectives of this study. For conducting the thematic analysis process for this study, five steps were identified according to Manyerere (2015), namely: familiarization with data, generating initial codes, searching for themes, defining and naming themes, and producing the final report.

4. Results

4.1 Types of Collective Information Required by VET Student Groups

VET respondents were questioned during the interviews about what collective information was required to accomplish the groups' given assignments. The results of the interview data on the types of collective information required to VET respondents at colleges A, B, and C are displayed in Table 1.1 below:

Table 1.1: Types of Collective Information Required to Accomplish Group's Assignment

SN	Types Of Collective Information Sought During CIS	VET Institutions (%) (VET College A, B & C)
1.	Practical Information	94 %
2.	Theory Information	61%

Source: Field Data (2023).

Table 1.1 above showed that both practical information (94%, n= 17) and theory information (61%, n= 11) were sought by VET student groups for group assignments during CIS. VET students required more practical information (94%) as their groups' tasks are practical-oriented compared to theory information (61%) during the CIS process.

4.2 Importance of Seeking Collective Information

During the interview, VET respondents from VET colleges A, B and C revealed the importance of seeking collective information to accomplish the groups' assignment. Table 1.2 below shows interview findings on the importance of seeking collective information to accomplish groups' assignments given to VET student groups:

Table 1.2: Importance of Seeking Collective Information

SN	Importance of Seeking Collective Information	Frequency	Percentage (%)
1	Seeking collective information brings unity and cooperation among VET groups members when accomplishing groups' tasks	3	17%
2	Seeking collective information helps in sharing skills and knowledge among VET student groups	5	28%
3	Seeking information collectively helps to avoid the committed mistakes when accomplishing the collective assignments	2	11%
4	Seeking information as a team aid to improve the confidence of group members when doing collective tasks	1	6%
5	Seeking information collectively helps to mitigate the risks when doing groups' tasks	1	6%
6	Seeking information as a team helps to share and plan new ideas among VET group's members	6	33%
7	Seeking information as a team saves time in accomplishing the collective assignments	3	17%
8	Seeking information collectively supports doing the work, which requires the group to be careful	1	6%
9	Seeking information as a team helps in understanding the level of interest of group members during the division of labor for groups' tasks	1	6%

Table 1.2 above shows that, the majority of VET respondents (33%, n=6) during the interview revealed the importance of seeking information collectively helps to share and plan new ideas among VET group members. 5(28%) of VET respondents during the interview expressed the importance of seeking collective information, saying that it helps

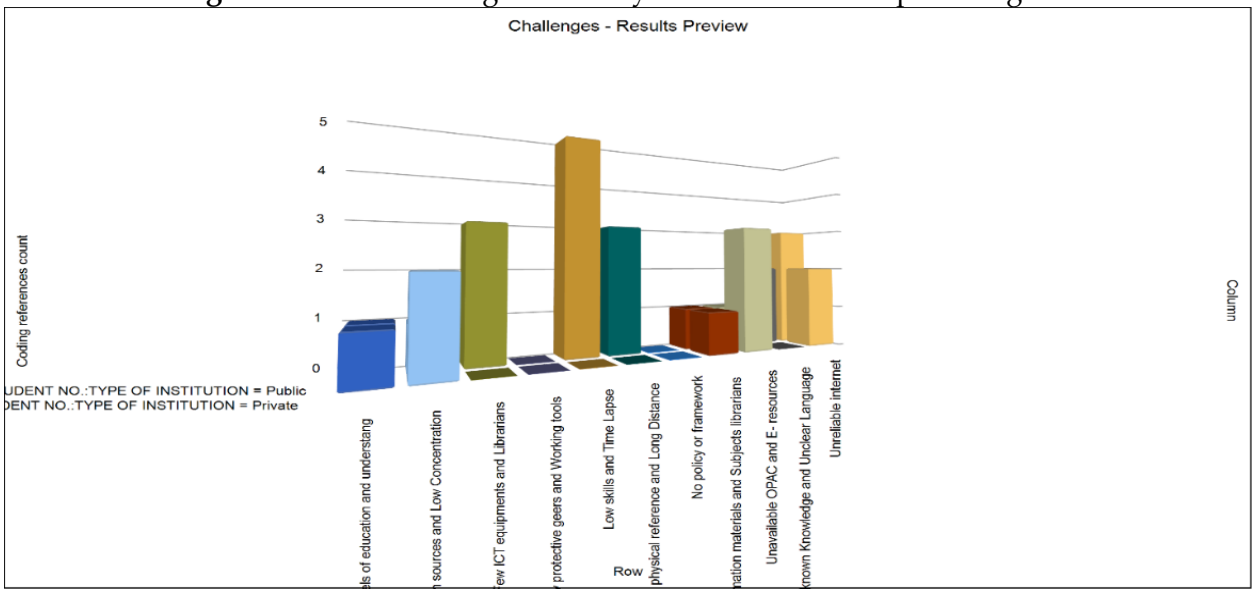
in sharing skills and knowledge among VET students when accomplishing groups' tasks. VET respondents mentioned other importance of seeking information collectively during CIS to VET respondents as follows: It saves time in accomplishing the collective assignment (17%, n=3) and brings unit and co-operation among VET group' members (17%, n=3). However, the interview findings from VET respondents were in the same level that seeking information collectively that helps to improves the confidence of group' members (6%, n=1), helps to mitigate the risks when doing group' task (6%, n=1), when doing the work which required to be careful (6%, n=1) and understand the level of interest of group' members during division of labor for group' task (6%, n=1).

4.3 Barriers Encountered by Student Groups during Collective Information Seeking (CIS)

This study was required to determine barriers faced by VET student groups during the collective information seeking (CIS) process in VET institutions. The interview findings obtained through interview and observation revealed the following key barriers during CIS process:

1) Low IL skills among VET student groups' members during CIS,
2) Lack of access to ICT equipment among VET students during CIS,
3) Unavailability of E-resources during CIS,
4) Unreliable internet to VET rural institutions during CIS,
5) Frequent electricity cuts hinder CIS and VET rural institutions that do not have standby generators for VET students to access e-resources.
6) Disagreement on selection of information among the massive information collected to VET student group members during CIS.
7) Absence of subjects' librarians who required to assist VET student groups during CIS.

Figure 1.2: The Challenges Faced by VET Student Groups during CIS



Source: Field Data, (2023).

Figure 1.2 portrays focus group discussion (FGD) findings that show the challenges encountered by VET student groups during CIS when accomplishing groups' assignments:

5. Discussion

5.1 Collective Information Applied to VET Student Groups

VET students sought both practical information (94%, n=17) and theory information (61%, n=11) during CIS to accomplish the groups' given assignments. VET rural libraries required to ensure VET students access both practical and theoretical information for groups' tasks.

The interviewees from an auto-electrical course in college C in Lushoto district pin-pointed that they required practical information for professional materials. Practical information was found vital to meet their collective information requirements to accomplish the group assignment during face-to-face interviews. For example, the information on a car's gearbox is required to VET student groups in the library when student groups of auto-electrical course required to refer during CIS. One of the VET respondents pursuing an auto-electrical course of college C in Lushoto district, during interview declared that, information retrieved from the library were mainly both theory and practical. This helped VET students to learn parts of the gearbox and how it functions. However, Desta, Preez and Ngulube (2017) revealed related findings to this study that, the library information collection in the University of South Africa is required to provide adequately to the postgraduate student information requirements during information seeking.

5.2 Importance of Collective Information Required to VET Student Groups

The majority of VET respondents (33%, n=6) during the interview revealed the importance of seeking information collectively helps to share and plan new ideas among VET group' members. VET student groups were given group tasks to make new products and solve complex problems that required them to share ideas. VET student group from the auto-electrical course was given group assignments to fix the problem of the car's starter, which was not functioning. The group tasks required the VET student group to exchange experiences through sharing ideas to accomplish the group assignment. Markova and McArthur (2015), in their book titled *Collaborative intelligence: Thinking with people who think differently,* affirm that, there is no choice but to collectively think as groups and communities. The question is on how to accomplish this feat, how to converge, ponder over and hear each other to touch and be touched by the intelligence and information required. The most significant danger the human species brings to today's world is the inability to think with those with different thoughts. It is vital for VET student groups to seek and share ideas collectively to accomplish the group assignments given as a team during CIS.

5(28%) of VET respondents during the interview expressed the importance of seeking collective information that helps in sharing skills and knowledge among VET students when accomplishing group tasks. Yet, information needs to be shared for problems to be solved. Specifically, Markova and McArthur (2015) contend that, for the problem of the group to be solved, information must come from diverse people during CIS with a common goal of coming up with the desired positive results.

Moreover, VET respondents (17%, n=3) pinpointed that seeking information collectively as a team saves time for accomplishing the collective assignment. Similar findings from Arraid (2021) revealed that information seekers indicated difficulty in obtaining electronic information, particularly from online databases, and they preferred seeking information performed by a mediator to save time.

5.3 Barriers Encountered by Student Groups During Collective Information Seeking (CIS)

5.3.1 Low IL Skills among VET Students

Face-to-face interviews revealed low IL skills during CIS, which was revealed by the majority (90%, n=17) of VET student groups' members as the major challenges to meet their groups' information requirements. Similarly, findings by Luambano (2016) showed that, undergraduate distance learning students in Tanzania contended with the problems of lacking awareness of online resources and skills for them to seek information on the web effectively. Reviewed literature found that IL education remained a non-priority area in many institutions of higher learning (IOHL) and, in many cases, was not even taught as effectively as it should be.

5.3.2 Lack of Access to ICT Equipment

Lack of access to ICT equipment (16.7%, n=3) to the rural VET institutions of college C in Lushoto district, college A in Babati district and college B in Kondoa district was mentioned as the major challenge during face-to-face interview. The computers were not enough for all students to access information during CIS. Student groups from colleges A, B and C were forced to access computers in shifts to accomplish their groups' given assignments. Thindwa, Chawinga and Dube (2019) reported similar findings to this study that undergraduate security students in Malawi faced the challenge of a shortage of computer laboratories for academic activities, accomplishing assignments, preparing for their examinations and completing research projects when seeking information.

5.3.3 Unavailability of E-Resources

The FGD findings from VET colleges B and C revealed that there were no electronic reference information materials for their courses to be referred to when VET student groups were given group assignments to accomplish. FGDs showed that VET respondents failed to accomplish the given groups' assignments on time due to the unavailability of required electronic information resources. These findings are consistent with He (2012), who stated that undergraduate students in China and the United States

of America used different electronic information resources for various academic tasks. Different electronic information sources were compulsory for VET student groups to accomplish their collective assignments given.

5.3.4 Unreliable Internet to VET Rural Institutions

Unreliable internet to VET rural institutions (28%, n=5) was one of major challenges that the VET respondents mentioned during interviews conducted in college A, B and C. VET respondents from college A, B and C admitted that, unreliable internet hindered them to meet their collective information requirements during CIS in VET rural' libraries. Moreover, this problem observed by the researcher that the internet was not available to VET institutions to same hours during the day. These findings concurred with those of Mwinyimbegu (2018), who showed that inadequate bandwidth (67.3%, n=35) among selected public university libraries in Tanzania hindered library users from meeting their information requirements when seeking information. Similar findings by Liman (2020) showed that (46%, n=39) of respondents reported poor provision of library services when they sought information was caused by poor internet services among academic libraries in Gombe State in Nigeria.

5.3.5 Unreliability of Electricity

During the FGDs, VET students mentioned that, power cuts and unreliability of the electricity supply hindered the access to information during CIS. Similar findings from Nihuka and Voogt (2012) noted that the power cuts and unreliability in the electricity supply were experienced as a challenge by all instructors when investigating the collaborative e-learning in the Open University of Tanzania. The observation findings of this study reported that, unreliability of the electricity to VET institutions hindered VET students to access collective information during CIS.

5.3.6 Disagreement on Selection of Appropriate Information

There was massive information retrieved on the internet during CIS when VET student groups were given collective assignments to accomplish from colleges A, B and C. The observation findings showed that, VET student groups' members of college A, B and C failed to evaluate massive retrieved information. The disagreements on which information was suitable for their queries was the main challenge to VET respondents to select appropriate information. Similar observation findings from Cheng and Tsai (2017) revealed that, specialized training for preparing novice researchers in Taiwan is critically required to evaluate relevant information or scholarly work to fulfil their research purposes.

5.3.7 Absence of Subjects Librarians

The interview findings revealed that, the respondents from VET student groups mentioned the absence of subjects librarians (61%, n=11) during CIS was among the hindrances to meet their collective information requirements. Saleh and Large (2011)

concurred with the findings from Fena (2020), showing that choral directors in New York required librarians and other information professionals to help the group (choral directors) to use the required information to discover new repertoire, plan concert programs, improve rehearsals and support other relevant activities.

6. Conclusion and Recommendation

6.1 Conclusion

The required IL skills were found to be the cross-cutting process among all VET student groups during CIS. VET student groups could not get the collective information requirements in the absence of IL skills, as was mentioned by 17 respondents (90). Lack of IL skills among VET student groups during CIS triggered a failure to retrieve complete required information to meet the collective information requirements for accomplishing the groups' given assignments. The basis of investigation has been framed by comprehending IL skills was the vital aspects for VET student groups in accessing required collective information requirements during CIS process. It noted that, IL skills used by VET student groups during the CIS process played a significant role in accomplishing the group assignments. IL skills used by VET student groups acted as the catalyst during the CIS process. Moreover, the findings of this study also explored the critical link between the CIS of VET student groups and IL skills used to solve the problems of assigned groups' tasks. VET student groups required both practical information (94%) and theory information (61%) to accomplish the given assignments. The major challenges encountered by VET students were: the absence of subjects' librarians to assist VET students during CIS and VET students failed to evaluate massive retrieved practical and theory information due to the lack of required IL skills during CIS process.

The findings revealed that it is vital to have CIS policy to assist VET student groups during the CIS process. Failure to have a CIS policy in place leads to VET student groups not getting the required practical and theoretical information to accomplish the given assignments. Hence, considering the importance of required IL skills during the CIS process triggers CIS policy formulation and implementation for VET student groups in rural areas during CIS.

6.2 Recommendation

Based on the findings, comments and conclusions of the study, the following recommendations are made according to whether they are connected to practice or policy. The recommendations in this section give some directions about how the issues highlighted in the findings and conclusion should be tackled. With these recommendations, it is expected that all stakeholders (VET student groups, VET library management, and librarians) ensure that VET student groups apply IL skills to meet their collective information requirements during the CIS process.

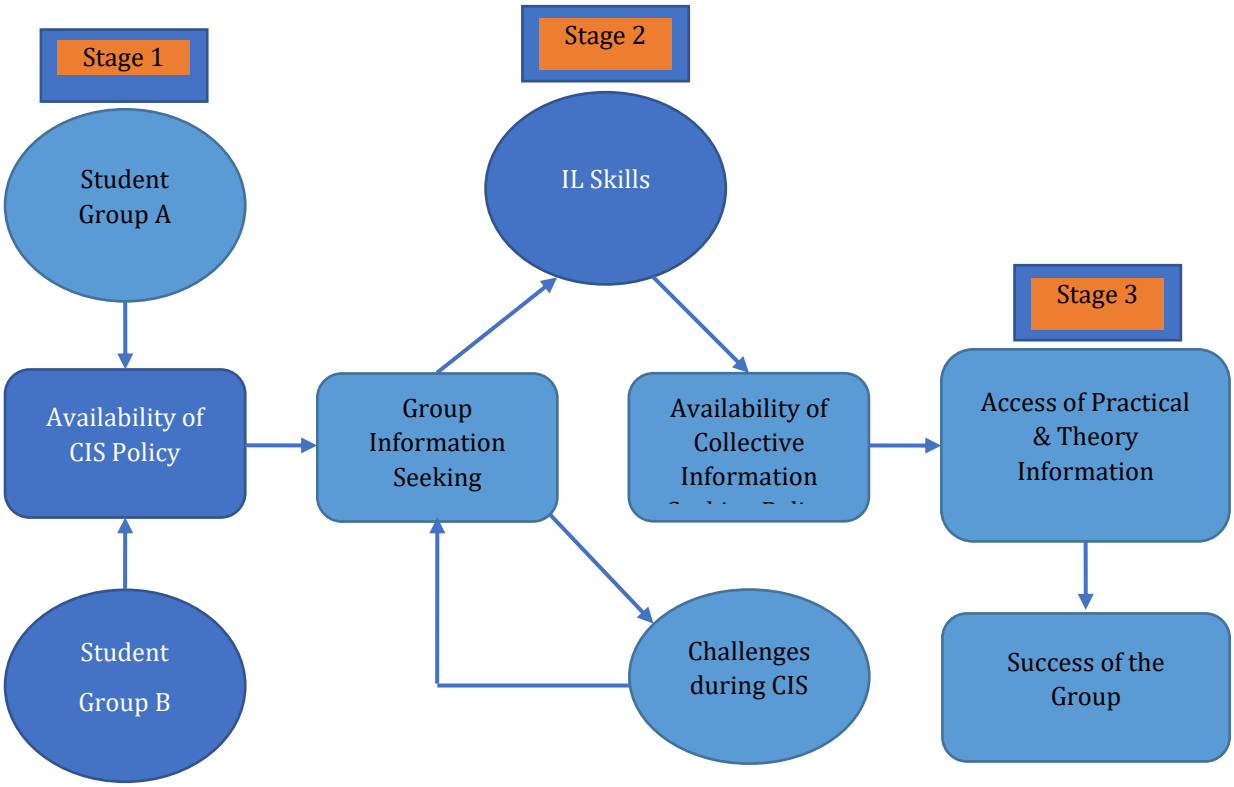
Therefore, this study successfully contributes to the theory by identification of new constructs (IL skills, practical and theory information, subjects' librarians) used during CIS to accomplish groups' assignments given to VET student groups in rural areas. The recommendations were as follows:

1) During CIS, IL skills were required by VET student groups to accomplish the group assignments given. The IL skills were required by VET student groups to get the required collective information requirements for group assignments.
2) IL skills need to be taught as compulsory subjects to VET student groups to first years and second year that helps CIS.
3) VET student groups required both practical and theory information to accomplish their groups' tasks.
4) In order to address the issue of IL skills to VET student groups during CIS process, FGD findings recommended VET rural libraries to organize seminars/conferences for training VET student groups especially on how to evaluate both sources of information and retrieved massive information on the net during CIS process. Hence, the positive perceptions towards IL skills during CIS process triggered to VET student groups meet their collective information requirements. Thindwa Chawinga and Dube (2019) recommended Mzuzu University library and the department of information science in Malawi to introduce information literacy courses, with a major component on searching and evaluating online information resources. This was validated by the study done by Cheng and Tsai (2017), who asserted that specialized training for preparing novice researchers to critically evaluate relevant information or scholarly work to fulfill their research purposes is required during information seeking.
5) Interview findings advised VET rural libraries to introduce the IL skills during CIS as the VET programmes for VET students who came directly from primary and secondary schools to get more practical experiences. VET programmes on IL skills during CIS assist all VET students to have equal experiences to those who started from certificate level on professional offered courses. VET respondents also have the opinion that, once all VET student group members have equal experiences on their professional courses, it could boost even their IL skills during CIS because they would have equal understanding. This assists VET student groups comprehend better what information is best required for their groups' tasks when seeking information collectively.
6) IL skills required to all VET student groups to understand criteria used for selecting and evaluating information sources when seeking information collectively. Understanding better the criteria for selecting information sources ensures VET student groups meet their collective information requirements during CIS. Similar findings from Faraji-Khiavi *et al.* (2021) showed that information literacy has been defined as a person's skill in identifying his/her information requirements and capability in organizing, evaluating and using information effectively when seeking information.

7) Interview findings recommended that the IL programme taught to VET institutions be evaluated from time to time during CIS. Evaluating IL skills to VET student groups helps to test the understanding of IL skills lent in classes to VET student's groups. An information literacy programme should be organized in the library to make students seek required information in the proper way (Boruah and Chotia, 2021).
8) There is no doubt that VET student groups in VET rural areas require CIS policy during the CIS process. FGD findings revealed that it is vital to have CIS policy to assist VET student groups during the CIS process. Failure to have a CIS policy in place leads to VET student groups not getting the required collective information requirements to accomplish the given assignments. Hence, considering the importance of required IL skills aspect during the CIS process triggers CIS policy formulation and implementation for VET student groups in rural areas.
9) This study proposes a model to assist VET student groups during CIS when accomplishing their group assignments given. Moreover, Shah's (2014) findings concur with the recommendation of this study that most of these approaches have been application-driven, and VET student groups still lack a set of models, specialized tools, and best practices that help to support collective information seeking (CIS) effectively. In library and information studies (LIS), most studies have been primarily focused on extending single-user environments to accommodate multiple participants in information-intensive situations (Shah, 2014). Figure 1.3 below presented the hypothesised model of this study that proposes an appropriate model that improves the collective information seeking of student groups in rural VET libraries in Tanzania.

The proposed model above (Figure 1.3) of this study comprised three (3) phases (stages) and was modified from Karunakaran, Spence, and Reddy's (2010) model. Thus, Karunakaran, Spence, and Reddy's (2013) model is anchored to conduct this study on collective information seeking (CIS) of VET student groups.

Figure 1.3: Hypothesised Model of CIS to VET Student Groups



Phase one of the model represented CIS policy required to student groups during CIS process when VET student groups seek information collectively to satisfy their group's information requirements. Student groups required CIS policy that stipulates the importance of application of required IL skills to VET student groups during CIS process to accomplish the group' assignment. This phase entailed collective problem identification (collective assignment) and it is directed on how to be solved through CIS policy. In this stage, the collective information requirements to finish the group assignment of the group are identified. Phase two shows the actual process of CIS to VET student groups. Under this phase, the groups required IL skills for solving the collective assignment. The available practical and theoretical information was then collectively retrieved and shared when the student group had at their disposal the information literacy (IL) skills such as information seeking strategies to meet their collective information requirements. However, in phase two, the group faces challenges of accessing practical and theoretical information for accomplishing groups' tasks given in the absence of required IL skills.

Also, groups could effectively retrieve information if there were no challenges (lack of information literacy skills) they encountered during the collective information-seeking process. Otherwise, any challenges the group encountered during the collective information-seeking process could torpedo the collective assignment. However, the challenges the student group countenanced did not reach phase three, the final in the series that could attributable to lack of information (practical and theory information) in

solving the problem identified in phase one when implementing CIS policy. The retrieved collective practical and theoretical information is essential in solving problems associated with the shared groups' assignments.

Moreover, if the group faced any challenges (Lack of IL skills) during the collective information seeking process, the group would have to restart the process of collective information seeking all over again, which naturally would prevent them from reaching the pinnacle of such searches in phase three. After all, this final phase required student groups to collectively seek information to solve the problems associated with their shared assignment when VET student groups have required both collective practical and theory information, which this phase could engender to enable student groups to accomplish group assignments.

This hypothesised model of CIS to VET student group is supported by Ganaie and Khazer (2014), who showed the trends of information-seeking behaviour research that the current researchers must study information requirements and information literacy dimensions together. Furthermore, there is a strong link between IL skills and accessing collective information (both theory and practical information) to VET student groups during the CIS process.

6.3 Theoretical Implications

This article established a theoretical model that assists VET student groups during CIS to understand the importance of the availability CIS policy for VET student groups that allows sharing of information and experiences to accomplish groups' assignments given when seeking information collectively.

6.4 Practical Implications

This study establishes the benchmark for VET student groups in sharing information and experiences during the CIS process. Moreover, this study pinpointed the importance of collective IL skills during the CIS process to VET students' groups in rural library settings. The required collective IL skills during the CIS process help to meet VET students' collective information requirements for accomplishing groups' assignments, which are practical oriented.

Authors' Contribution

Sefu H. Abeid analysed, presented and discussed data for this manuscript. Prof. Boemo N. Jorosi and Dr. Neo P. Mooko validated the results and guided, edited and revised this study.

Data Availability

The data supporting the findings of this article is available on request from the authors. The data are not publicly available because they contain information that could compromise the privacy of research participants.

Disclaimer

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Ethical Statements

From the outset, the respondents were briefed beforehand about the study in line with established research protocols. The respondents assured that the results were not disclosed to any third party and were used only for academic purposes. This study maintained the high standards of personal conduct, practicing honesty in all our professional relationships and endeavors. Thereafter, the participants had to sign consent forms after briefings for them to provide informed consent.

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Conflict of Interest Statement

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

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